Regional HOT Lanes Network Feasibility Study

APPENDIX H

COST ESTIMATES FOR STUDY CORRIDORS

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and

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Introduction

Phases 2 and 2b of the HOT Lanes Study developed preliminary cost estimates for developing the HOT lanes network based on general assumptions regarding the types of modifications that would be needed. In Phase 3 of the study five corridor segments were studied in depth to, among other things, develop more detailed estimates of the actual costs in specific cases. The five corridor segments studied were:

- I-80 in Solano County from the Yolo County Line to I-680
- I-680 in Contra Costa County from Marina Vista Drive to Livorna Road
- SR-237 in Santa Clara County from I-880 to SR-85
- US-101 in Marin County from North San Pedro Road to Lucky Drive
- I-880 in Alameda County from SR-92 to SR-237

Methodology

The methodology used to prepare these estimates was:

- The study team reviewed and revised the roadway elements of unit capital costs determined in a previous phase to reflect recent trends, comments from the local Congestion Management Agencies on actual costs of recent projects, and discussions with Caltrans staff.
- The study team then identified major cost elements such as access points and the associated transition lanes, lane-miles of conversion of HOV lanes, and lane-miles of new HOT lanes, in the development of HOT lane cost elements for the corridor segments. Special locations that may require major modifications, such as replacement of structures or sound walls, were also identified.
- In some cases cost estimates were available from other studies for specific improvements that would be needed for HOT lanes, such as replacement of an over-crossing. In such cases the cost estimates were examined and, if found to be relevant, were used in this study either directly or after appropriate modification (such as factoring to reflect current costs and adjusting contingencies to be consistent with this study).

- Based on the unit costs and the identified cost elements consistent with MTC's current HOT lane design criteria, the study team then prepared planning-level cost estimates for the development of a HOT lane in the study corridor. Separate estimates were made for the Basic Approach and the Revised Full Featured Approach. Each estimate was disaggregated to show the costs associated with provision of the typical HOT lane section, costs associated with access points, and costs associated with special locations such as major structures that may need reconstruction or replacement.

Results

The results of these analyses are shown in the tables below. There are several notable features of the analyses:

- Right-of-way (ROW) costs were not estimated for any of the five study corridors. In three cases (I-80 in Solano County, SR-237 in Santa Clara County, and I-880 in Alameda County) the original freeway ROW was sufficient to accommodate the HOT facility. In the case of US-101 in Marin County, the original ROW was not sufficient, but Transportation Authority of Marin recently acquired additional ROW whose costs have already been covered by another project[1]. In the case of I-680 in Alameda County, the freeway ROW is not sufficient to accommodate the HOT lanes, but acquisition of additional ROW through Walnut Creek and Pleasant Hill is not considered feasible. Consequently no cost estimate was prepared for the Revised Full-Featured Approach or for the portions of the Basic Approach that were considered physically infeasible.
- There was a modest (8%) difference in the cost of the Basic Approach and the Revised Full Featured Approach for SR-237. This is because the only additional cost would come from widening the pavement by 2 feet to accommodate the buffer while maintaining 12-foot travel lanes.
- In contrast, the Revised Full Featured Approach would cost more than twice as much as the Basic Approach for US-101 in Marin County. This is because of

[1] The HOV Gap Closure Project

the need to widen a long viaduct and to excavate into a hillside to accommodate the additional width required to maintain standards.

The corridor case studies demonstrate that the cost implications of the two design approaches evaluated as part of Phase 3 can vary widely depending on the constraints in each corridor. The key conclusion from this analysis is the need for flexibility in pursuing HOT lane development in different corridors. There appear to be places where the Full Featured design could be met at reasonable cost, while there are other places where it would be prohibitively expensive or would entail community impacts that would likely make the project infeasible. These trade-offs are typical of any urban highway project in the Bay Area, and are usually addressed in the Project Study Report phase of development.

"Basic" Approach	Unit	Number of Units (A)	Unit Cost (B)	Construction Cost (C)=(A)*(B)	ROW (acres) (D)	ROW ($M/acre) (E)	ROW Cost ($M) (F)=(D)*(E)	Line Item Cost (G)=(C)+(F)	Category Cost		Environmental Document Anticipated
Mainline Provision of HOT Lane by Category									$136,730,000	58%	
Conversion of Existing or Planned HOV Lanes	Lane-Miles	14.3	$639,000	$9,160,000				$9,160,000			Categorical Exemption
Widen to inside to reduced design standard (16')	Lane-Miles	39.4	$2,722,000	$107,360,000				$107,360,000			Probably Negative Declaration
Widen to inside to full design standard (24')	Lane-Miles	6.0	$3,367,000	$20,210,000				$20,210,000			Probably Negative Declaration*
Widen to outside to reduced design standard (16')	Lane-Miles	0.0	$2,299,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to outside to full design standard (24')*	Lane-Miles	0.0	$2,938,000	$0				$0			Possible Neg-Dec or Mitigated ND
Modify Existing Ramps	Ramp	0	$546,700	$0				$0			Possible Neg-Dec or Mitigated ND
Ingress and Egress Points									$97,630,000	42%	
Ingress/egress points, widen to inside (only)	Site	1	$3,022,000	$3,030,000				$3,030,000			Probably Negative Declaration
Ingress/egress points, widen to inside & outside	Site	17	$5,183,000	$88,120,000				$88,120,000			Possible Neg-Dec or Mitigated ND
Ingress/egress points, widen to outside (only)	Site	2	$3,236,000	$6,480,000				$6,480,000			Possible Neg-Dec or Mitigated ND
		20									
Special locations									$170,000	0%	
Sweeny Creek bridge (widen)	Site	1		$0				$0			Probably Negative Declaration
Cherry Glen Road overcrossing, east	Site	1		$110,000				$110,000			Possible Neg-Dec or Mitigated ND
Cherry Glen Road overcrossing, west	Site	1		$60,000				$60,000			Possible Neg-Dec or Mitigated ND
Total without Contingency				$234,530,000			$0	$234,530,000	$234,530,000	100%	
Contingency								50%			
Total with Contingency								$351,795,000			

No ROW acquisition is needed in this corridor

Assumes sub-standard shoulders instead of widening

* A negative declaration may be possible if the Initial Study does not find that a significant environmental impact is likely to occur

"Revised Full Featured" Approach	Unit	Number of Units (A)	Unit Cost (B)	Construction Cost (C)=(A)*(B)	ROW (acres) (D)	ROW ($M/acre) (E)	ROW Cost ($M) (F)=(D)*(E)	Line Item Cost (G)=(C)+(F)	Category Cost		Environmental Document Anticipated
Mainline Provision of HOT Lane by Category									$184,070,000	65%	
Conversion of Existing or Planned HOV Lanes	Lane-Miles	14.3	$639,000	$9,160,000				$9,160,000			Categorical Exemption
Widen to inside to reduced design standard (16')	Lane-Miles	0.0	$2,722,000	$0				$0			Probably Negative Declaration**
Widen to inside to full design standard (24')	Lane-Miles	6.0	$3,367,000	$20,210,000				$20,210,000			Probably Negative Declaration
Widen to outside to reduced design standard (16')	Lane-Miles	0.0	$2,299,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to outside to full design standard (24')*	Lane-Miles	39.4	$2,938,000	$115,880,000				$115,880,000			Possible Neg-Dec or Mitigated ND
Modify Existing Ramps**	Ramp	71	$546,700	$38,820,000				$38,820,000			Possible Neg-Dec or Mitigated ND
Ingress and Egress Points									$97,630,000	34%	
Ingress/egress points, widen to inside (only)	Site	1	$3,022,000	$3,030,000				$3,030,000			Probably Negative Declaration
Ingress/egress points, widen to inside & outside	Site	17	$5,183,000	$88,120,000				$88,120,000			Possible Neg-Dec or Mitigated ND
Ingress/egress points, widen to outside (only)	Site	2	$3,236,000	$6,480,000				$6,480,000			Possible Neg-Dec or Mitigated ND
		20									
Special locations									$2,470,000	1%	
Sweeny Creek bridge (widen)	Site	1		$2,300,000				$2,300,000			Probably Full EIR
Cherry Glen Road overcrossing, east	Site	1		$110,000				$110,000			Possible Neg-Dec or Mitigated ND
Cherry Glen Road overcrossing, west	Site	1		$60,000				$60,000			Possible Neg-Dec or Mitigated ND
Total without Contingency				$284,170,000			$0	$284,170,000	$284,170,000	100%	
Contingency								50%			
Total with Contingency								$426,255,000			

No ROW acquisition is needed in this corridor

Cost Estimate for I-80 in Solano County from Yolo County Line to I-680

"Basic" Approach	Unit	Number of Units (A)	Unit Cost (B)	Construction Cost (C)=(A)*(B)	ROW (acres) (D)	ROW ($M/acre) (E)	ROW Cost ($M) (F)=(D)*(E)	Line Item Cost (G)=(C)+(F)	Category Cost		Environmental Document Anticipated
Mainline Provision of HOT Lane by Category									$10,950,000	19%	
Conversion of Existing or Planned HOV Lanes (narrowing general purpose lanes by 2')	Lane-Miles	12.3	$639,000	$7,860,000				$7,860,000			Categorical Exemption
Conversion of Existing or Planned HOV Lanes (reducing inside shoulder by 1'-2')	Lane-Miles	1.2	$1,200,000	$1,440,000				$1,440,000			Probably Negative Declaration
Conversion of Existing or Planned HOV Lanes (widening to outside by 2')	Lane-Miles		$1,587,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to inside to reduced design standard (16')	Lane-Miles		$2,722,000	$0				$0			Probably Negative Declaration
Widen to inside to full design standard (24')	Lane-Miles		$3,367,000	$0				$0			Probably Negative Declaration*
Widen to outside to reduced design standard (16')	Lane-Miles		$2,299,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to outside to full design standard (24')*	Lane-Miles		$2,938,000	$0				$0			Possible Neg-Dec or Mitigated ND
Modify Existing Ramps	Ramp	3	$546,700	$1,650,000	No ROW acquisition is needed in this corridor			$1,650,000			Possible Neg-Dec or Mitigated ND
Ingress and Egress Points									$25,920,000	45%	
Ingress/egress points, widen to inside (only)	Site	0	$3,022,000	$0				$0			Probably Negative Declaration
Ingress/egress points, widen to inside & outside	Site	5	$5,183,000	$25,920,000				$25,920,000			Possible Neg-Dec or Mitigated ND
Ingress/egress points, widen to outside (only)	Site	0	$3,236,000	$0				$0			Possible Neg-Dec or Mitigated ND
		5									
Special locations									$21,180,000	36%	
Bridge over Concord Avenue (Widening for SB-E1)	Sq. Ft.	3094	$420	$1,300,000				$1,300,000			Probably Negative Declaration
Bridge over Willow Pass Road (Widening for SB-I1)	Sq. Ft.	3024	$420	$1,280,000				$1,280,000			Possible Neg-Dec or Mitigated ND
Bridge over Monument Boulevard (Widening for SB-I2)	Sq. Ft.	8554	$420	$3,600,000				$3,600,000			Possible Neg-Dec or Mitigated ND
Outrigger Structure (for BART overcrossing)	Site	1	$15,000,000	$15,000,000				$15,000,000			
Total without Contingency				$58,050,000			$0	$58,050,000	$58,050,000	100%	
Contingency								50%			
Total with Contingency								$87,075,000			

No cost estimate was prepared for the Revised Full-Featured Approach because it is considered physically infeasible.

Cost Estimate for I-680 in Contra Costa County from Martinez to Livorna Road

"Basic" Approach	Unit	Number of Units (A)	Unit Cost (B)	Construction Cost (C)=(A)*(B)	ROW (acres) (D)	ROW ($M/acre) (E)	ROW Cost ($M) (F)=(D)*(E)	Line Item Cost (G)=(C)+(F)	Category Cost		Environmental Document Anticipated
Mainline Provision of HOT Lane by Category									$33,190,000	32%	
Conversion of Existing or Planned HOV Lanes (narrowing general purpose lanes by 2')	Lane-Miles		$639,000	$0				$0			Categorical Exemption
Conversion of Existing or Planned HOV Lanes (reducing inside shoulder by 1'-2')	Lane-Miles	12.6	$1,200,000	$15,120,000				$15,120,000			Probably Negative Declaration*
Conversion of Existing or Planned HOV Lanes (widening to outside by 2')	Lane-Miles		$1,587,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to inside to reduced design standard (16')	Lane-Miles	3.0	$2,722,000	$8,170,000				$8,170,000			Probably Negative Declaration
Widen to inside to full design standard (24')	Lane-Miles		$3,367,000	$0				$0			Probably Negative Declaration
Widen to outside to reduced design standard (16')	Lane-Miles	2.4	$2,299,000	$5,520,000				$5,520,000			Possible Neg-Dec or Mitigated ND
Widen to outside to full design standard (24')*	Lane-Miles		$2,938,000	$0				$0			Possible Neg-Dec or Mitigated ND
Modify Existing Ramps	Ramp	8	$546,700	$4,380,000	No ROW acquisition is needed in this corridor			$4,380,000			Possible Neg-Dec or Mitigated ND
Ingress and Egress Points									$62,200,000	61%	
Ingress/egress points, widen to inside (only)	Site	0	$3,022,000	$0				$0			Probably Negative Declaration
Ingress/egress points, widen to inside & outside	Site	12	$5,183,000	$62,200,000				$62,200,000			Possible Neg-Dec or Mitigated ND
Ingress/egress points, widen to outside (only)	Site	0	$3,236,000	$0				$0			Possible Neg-Dec or Mitigated ND
		12									
Special locations									$7,030,000	7%	
Bridge over Mathilda Ave.	Site	1	$1,690,000	$1,690,000				$1,690,000			Probably Negative Declaration
Bridge over US 101	Site	1	$2,670,000	$2,670,000				$2,670,000			Possible Neg-Dec or Mitigated ND
Bridge over Central Expressway	Site	1	$2,670,000	$2,670,000				$2,670,000			Possible Neg-Dec or Mitigated ND
Total without Contingency				$102,420,000			$0	$102,420,000	$102,420,000	100%	
Contingency								50%			
Total with Contingency								**$153,630,000**			

* A negative declaration may be possible if the Initial Study does not find that a significant environmental impact is likely to occur

"Revised Full Featured" Approach	Unit	Number of Units (A)	Unit Cost (B)	Construction Cost (C)=(A)*(B)	ROW (acres) (D)	ROW ($M/acre) (E)	ROW Cost ($M) (F)=(D)*(E)	Line Item Cost (G)=(C)+(F)	Category Cost		Environmental Document Anticipated
Mainline Provision of HOT Lane by Category									$41,550,000	38%	
Conversion of Existing or Planned HOV Lanes (narrowing general purpose lanes by 2')	Lane-Miles		$639,000	$0				$0			Categorical Exemption
Conversion of Existing or Planned HOV Lanes (reducing inside shoulder by 1'-2')	Lane-Miles		$1,200,000	$0				$0			Probably Negative Declaration
Conversion of Existing or Planned HOV Lanes (widening to outside by 2')	Lane-Miles	12.6	$1,587,000	$20,000,000				$20,000,000			Possible Neg-Dec or Mitigated ND
Widen to inside to reduced design standard (16')	Lane-Miles		$2,722,000	$0				$0			Probably Negative Declaration
Widen to inside to full design standard (24')	Lane-Miles	3.0	$3,367,000	$10,110,000				$10,110,000			Probably Negative Declaration
Widen to outside to reduced design standard (16')	Lane-Miles		$2,299,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to outside to full design standard (24')*	Lane-Miles	2.4	$2,938,000	$7,060,000				$7,060,000			Possible Neg-Dec or Mitigated ND
Modify Existing Ramps**	Ramp	8	$546,700	$4,380,000	No ROW acquisition is needed in this corridor			$4,380,000			Possible Neg-Dec or Mitigated ND
Ingress and Egress Points									$62,200,000	56%	
Ingress/egress points, widen to inside (only)	Site	0	$3,022,000	$0				$0			Probably Negative Declaration
Ingress/egress points, widen to inside & outside	Site	12	$5,183,000	$62,200,000				$62,200,000			Possible Neg-Dec or Mitigated ND
Ingress/egress points, widen to outside (only)	Site	0	$3,236,000	$0				$0			Possible Neg-Dec or Mitigated ND
		12									
Special locations									$7,030,000	6%	
Bridge over Mathilda Ave.	Site	1	$1,690,000	$1,690,000				$1,690,000			Probably Full EIR
Bridge over US 101	Site	1	$2,670,000	$2,670,000				$2,670,000			Possible Neg-Dec or Mitigated ND
Bridge over Central Expressway	Site	1	$2,670,000	$2,670,000				$2,670,000			Possible Neg-Dec or Mitigated ND
Total without Contingency				$110,780,000			$0	$110,780,000	$110,780,000	100%	
Contingency								50%			
Total with Contingency								**$166,170,000**			

Cost Estimate for SR-237 in Santa Clara County from I-880 to SR-85

"Basic" Approach	Unit	Number of Units (A)	Unit Cost (B)	Construction Cost (C)=(A)*(B)	ROW (acres) (D)	ROW ($M/acre) (E)	ROW Cost ($M) (F)=(D)*(E)	Line Item Cost (G)=(C)+(F)	Category Cost		Environmental Document Anticipated
Mainline Provision of HOT Lane by Category									$7,240,000	26%	
Conversion of Existing or Planned HOV Lanes (narrowing general purpose lanes by 2')	Lane-Miles	8.5	$639,000	$5,440,000				$5,440,000			Categorical Exemption
Conversion of Existing or Planned HOV Lanes (reducing inside shoulder by 1'-2')	Lane-Miles	1.5	$1,200,000	$1,800,000				$1,800,000			Probably Negative Declaration*
Conversion of Existing or Planned HOV Lanes (widening to outside by 2')	Lane-Miles		$1,587,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to inside to reduced design standard (16')	Lane-Miles		$2,722,000	$0				$0			Probably Negative Declaration
Widen to inside to full design standard (24')	Lane-Miles		$3,367,000	$0				$0			Probably Negative Declaration
Widen to outside to reduced design standard (16')	Lane-Miles		$2,299,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to outside to full design standard (24')*	Lane-Miles		$2,938,000	$0				$0			Possible Neg-Dec or Mitigated ND
Modify Existing Ramps	Ramp		$546,700	$0	No ROW acquisition is needed in this corridor			$0			Possible Neg-Dec or Mitigated ND
Ingress and Egress Points									$20,740,000	74%	
Ingress/egress points, widen to inside (only)	Site	0	$3,022,000	$0				$0			Probably Negative Declaration
Ingress/egress points, widen to inside & outside	Site	4	$5,183,000	$20,740,000				$20,740,000			Possible Neg-Dec or Mitigated ND
Ingress/egress points, widen to outside (only)	Site	0	$3,236,000	$0				$0			Possible Neg-Dec or Mitigated ND
		4									
Special locations									$0	0%	
Widen/construct Viaduct by 8'	Lane-Miles		$31,520,000	$0				$0			
Conversion (excavating hill by 5.5 ft)	Lane-Miles		$3,861,000	$0				$0			
Conversion (excavating hill by 13.5 ft) at Cal Park Hill Section	Lane-Miles		$21,097,000	$0				$0			
Total without Contingency				$27,980,000			$0	$27,980,000	$27,980,000	100%	
Contingency								50%			
Total with Contingency								$41,970,000			

* A negative declaration may be possible if the Initial Study does not find that a significant environmental impact is likely to occur

"Revised Full Featured" Approach	Unit	Number of Units (A)	Unit Cost (B)	Construction Cost (C)=(A)*(B)	ROW (acres) (D)	ROW ($M/acre) (E)	ROW Cost ($M) (F)=(D)*(E)	Line Item Cost (G)=(C)+(F)	Category Cost		Environmental Document Anticipated
Mainline Provision of HOT Lane by Category									$15,870,000	28%	
Conversion of Existing or Planned HOV Lanes (narrowing general purpose lanes by 2')	Lane-Miles		$639,000	$0				$0			Categorical Exemption
Conversion of Existing or Planned HOV Lanes (reducing inside shoulder by 1'-2')	Lane-Miles		$1,200,000	$0				$0			Probably Negative Declaration*
Conversion of Existing or Planned HOV Lanes (widening to outside by 2')	Lane-Miles	10.0	$1,587,000	$15,870,000				$15,870,000			Possible Neg-Dec or Mitigated ND
Widen to inside to reduced design standard (16')	Lane-Miles		$2,722,000	$0				$0			Probably Negative Declaration
Widen to inside to full design standard (24')	Lane-Miles		$3,367,000	$0				$0			Probably Negative Declaration
Widen to outside to reduced design standard (16')	Lane-Miles		$2,299,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to outside to full design standard (24')*	Lane-Miles		$2,938,000	$0				$0			Possible Neg-Dec or Mitigated ND
Modify Existing Ramps**	Ramp		$546,700	$0	No ROW acquisition is needed in this corridor			$0			Possible Neg-Dec or Mitigated ND
Ingress and Egress Points									$20,740,000	36%	
Ingress/egress points, widen to inside (only)	Site	0	$3,022,000	$0				$0			Probably Negative Declaration
Ingress/egress points, widen to inside & outside	Site	4	$5,183,000	$20,740,000				$20,740,000			Possible Neg-Dec or Mitigated ND
Ingress/egress points, widen to outside (only)	Site	0	$3,236,000	$0				$0			Possible Neg-Dec or Mitigated ND
		4									
Special locations									$20,880,000	36%	
Widen/construct Viaduct by 8'	Lane-Miles	0.4	$31,520,000	$12,610,000				$12,610,000			
Conversion (excavating hill by 5.5 ft)	Lane-Miles	0.5	$3,861,000	$1,940,000				$1,940,000			
Conversion (excavating hill by 13.5 ft) at Cal Park Hill Section	Lane-Miles	0.3	$21,097,000	$6,330,000				$6,330,000			
Total without Contingency				$57,490,000			$0	$57,490,000	$57,490,000	100%	
Contingency								50%			
Total with Contingency								$86,235,000			

Cost Estimate for US-101 in Marin County from N. San Pedro Road to Lucky Drive

"Basic" Approach	Unit	Number of Units (A)	Unit Cost (B)	Construction Cost (C)=(A)*(B)	ROW (acres) (D)	ROW ($M/acre) (E)	ROW Cost ($M) (F)=(D)*(E)	Line Item Cost (G)=(C)+(F)	Category Cost		Environmental Document Anticipated
Mainline Provision of HOT Lane by Category									$23,650,000	28%	
Conversion of Existing or Planned HOV Lanes (narrowing general purpose lanes by 2')	Lane-Miles	37.0	$639,000	$23,650,000				$23,650,000			Categorical Exemption
Conversion of Existing or Planned HOV Lanes (reducing inside shoulder by 1'-2')	Lane-Miles		$1,200,000	$0				$0			Probably Negative Declaration*
Conversion of Existing or Planned HOV Lanes (widening to outside by 2')	Lane-Miles		$1,587,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to inside to reduced design standard (16')	Lane-Miles		$2,722,000	$0				$0			Probably Negative Declaration
Widen to inside to full design standard (24')	Lane-Miles		$3,367,000	$0				$0			Probably Negative Declaration
Widen to outside to reduced design standard (16')	Lane-Miles		$2,299,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to outside to full design standard (24')*	Lane-Miles		$2,938,000	$0				$0			Possible Neg-Dec or Mitigated ND
Modify Existing Ramps	Ramp		$546,700	$0	No ROW acquisition is needed in this corridor			$0			Possible Neg-Dec or Mitigated ND
Ingress and Egress Points									$62,200,000	72%	
Ingress/egress points, widen to inside (only)	Site	0	$3,022,000	$0				$0			Probably Negative Declaration
Ingress/egress points, widen to inside & outside	Site	12	$5,183,000	$62,200,000				$62,200,000			Possible Neg-Dec or Mitigated ND
Ingress/egress points, widen to outside (only)	Site	0	$3,236,000	$0				$0			Possible Neg-Dec or Mitigated ND
Special locations											
Total without Contingency				$85,850,000			$0	$85,850,000	$85,850,000	100%	
Contingency								50%			
Total with Contingency								$128,775,000			

* A negative declaration may be possible if the Initial Study does not find that a significant environmental impact is likely to occur

"Revised Full Featured" Approach	Unit	Number of Units (A)	Unit Cost (B)	Construction Cost (C)=(A)*(B)	ROW (acres) (D)	ROW ($M/acre) (E)	ROW Cost ($M) (F)=(D)*(E)	Line Item Cost (G)=(C)+(F)	Category Cost		Environmental Document Anticipated
Mainline Provision of HOT Lane by Category									$58,720,000	49%	
Conversion of Existing or Planned HOV Lanes (narrowing general purpose lanes by 2')	Lane-Miles		$639,000	$0				$0			Categorical Exemption
Conversion of Existing or Planned HOV Lanes (reducing inside shoulder by 1'-2')	Lane-Miles		$1,200,000	$0				$0			Probably Negative Declaration*
Conversion of Existing or Planned HOV Lanes (widening to outside by 2')	Lane-Miles	37.0	$1,587,000	$58,720,000				$58,720,000			Possible Neg-Dec or Mitigated ND
Widen to inside to reduced design standard (16')	Lane-Miles		$2,722,000	$0				$0			Probably Negative Declaration
Widen to inside to full design standard (24')	Lane-Miles		$3,367,000	$0				$0			Probably Negative Declaration
Widen to outside to reduced design standard (16')	Lane-Miles		$2,299,000	$0				$0			Possible Neg-Dec or Mitigated ND
Widen to outside to full design standard (24')*	Lane-Miles		$2,938,000	$0				$0			Possible Neg-Dec or Mitigated ND
Modify Existing Ramps	Ramp		$546,700	$0	No ROW acquisition is needed in this corridor			$0			Possible Neg-Dec or Mitigated ND
Ingress and Egress Points									$62,200,000	51%	
Ingress/egress points, widen to inside (only)	Site	0	$3,022,000	$0				$0			Probably Negative Declaration
Ingress/egress points, widen to inside & outside	Site	12	$5,183,000	$62,200,000				$62,200,000			Possible Neg-Dec or Mitigated ND
Ingress/egress points, widen to outside (only)	Site	0	$3,236,000	$0				$0			Possible Neg-Dec or Mitigated ND
		12									
Special locations											
Total without Contingency				$120,920,000			$0	$120,920,000	$120,920,000	100%	
Contingency								50%			
Total with Contingency								$181,380,000			

Cost Estimate for I-880 in Alameda County from SR-92 to SR-237